REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 27-34 are pending in the present application. Claims 1-3, 5-7, 9, and 26 are canceled without prejudice and Claims 27-34 are added by the present amendment.

In the outstanding Office Action, Claims 2, 5, and 7 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1 and 2 were rejected under 35 U.S.C § 102(b) as anticipated by Hakey et al. (U.S. Patent No. 6,232,170 B1, herein "Hakey"); and Claims 3, 5-7, 9, and 26 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hakey in view of Disney (U.S. Patent No. 6,127,701).

The outstanding rejections are moot because Claims 1-3, 5-7, 9, and 26 have been canceled. However, the art applied is discussed in regard to new Claims 27-34.

New Claims 27-34 are added to set forth the invention in a varying scope and Applicants submit the new claims are supported by the originally filed specification. In particular, new Claims 27-34 find support in Figure 7 and in the specification, for example at page 14, line 21, to page 16, line 11. No new matter is believed to be added.

Briefly recapitulating, independent Claim 27 is directed to a semiconductor device having a supporting substrate with a first region and a second region. A surface of the first region has a position lower than a position of a surface of the second region. A buried oxide layer is formed on the first region of the supporting substrate, a semiconductor layer is formed on the buried oxide layer, and a first element is formed in the semiconductor layer. An epitaxial layer is formed on the second region of the supporting substrate and an interface between the supporting substrate and the epitaxial layer is located at a deeper position than the position of the surface of the second region. A second element is formed in the epitaxial layer and the second element includes a DRAM memory cell including a cell transistor and a

trench capacitor. The trench capacitor is formed across the interface between the supporting substrate and the epitaxial layer. A first element isolation region is interposed between the epitaxial layer and the semiconductor layer. The first element isolation region extends from an upper surface of the semiconductor layer to a position deep into the semiconductor layer, at least to an upper surface of the buried oxide layer. The buried oxide layer and the first element isolation region jointly serve to electrically insulate the semiconductor layer from the epitaxial layer and the supporting substrate.

In a non-limiting example, Figure 7 shows the supporting substrate 31, the buried oxide layer 32, the semiconductor layer 33, the first element 36-37, the epitaxial layer 34, the interface JS, the second element 42-43, the trench capacitor CC, and the first element isolation region 35. As shown in Figure 7, the first element isolation region 35 and the buried oxide layer 32 electrically insulate the semiconductor layer 33 from the epitaxial layer 34 and the supporting substrate 31.

The semiconductor device of independent Claim 27 advantageously reduces a leakage current as disclosed in the specification at page 15, line 26, to page 16, line 11.

Turning to the applied art, Hakey shows in Figures 1(d) and 1(e) a substrate with a first region 16 and a second region 14 and having various layers and elements formed in the first and second regions. However, Hakey does not teach or suggest (i) a first element isolation region interposed between an epitaxial layer and a semiconductor layer, (ii) the first element isolation region extending from an upper surface of the semiconductor layer to a position deep into the semiconductor layer, at least to an upper surface of a buried oxide layer, and (iii) the buried oxide layer and the first element isolation region jointly serving to electrically insulate the semiconductor layer from the epitaxial layer and the supporting substrate, as recited in independent Claim 27.

The outstanding Office Action relies on Disney for disclosing forming circuit elements in two different regions. However, Disney does not cure the deficiencies of Hakey discussed above.

Accordingly, it is respectfully submitted that independent Claim 27 and each of the claims depending therefrom patentably distinguish over Hakey and Disney, either alone or in combination.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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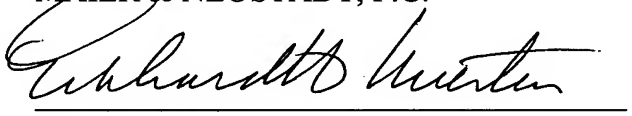

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